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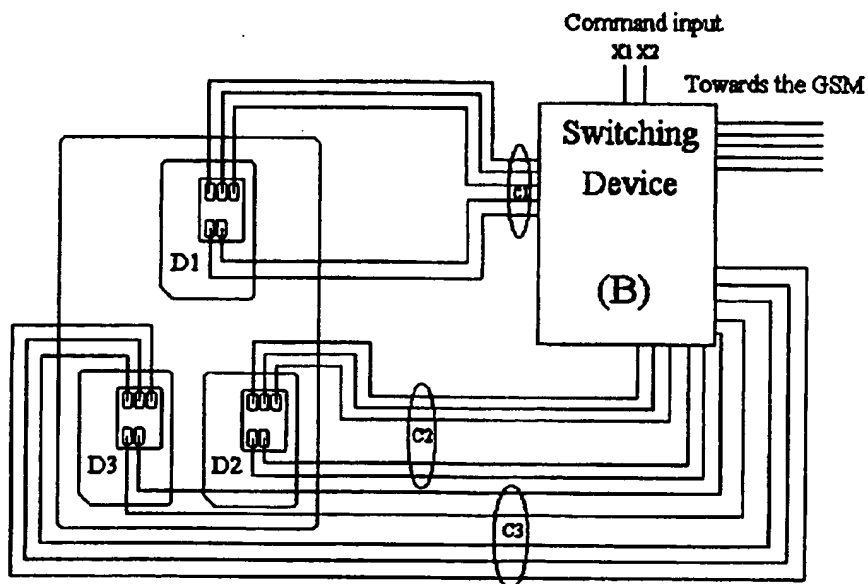
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(54) Title: MULTI-SIM CARD GSM CELLULAR TELEPHONE



(57) Abstract

A cellular telephone into which several SIM cards can be inserted is disclosed, thereby permitting the use of several telephone numbers without it being necessary to change the card manually each time. This offers two significant advantages: time savings over the conventional procedure for replacement of one SIM card with another and avoidance of damage to the SIM card microchips and mounting inside the telephone caused by repeated replacement of the card.

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Description

MULTI-SIM CARD GSM CELLULAR TELEPHONE

The device, as illustrated in the attached figures, consists of: a cellular telephone (A-Fig.1), which contains a switching circuit (B-Fig.2) that makes it possible to switch the wires (C1,C2,C3-Fig.2) leading from the various microchips (D1,D2,D3-Fig.2); the switching circuit contains a multiplexer (MUX-Fig.3) with four five-line inputs formed, in turn, by five multiplexers with four one-line inputs connected in parallel and commanded by the two inputs X1 and X2 in the way described in the MUX truth table (Fig.4): one of the three microchips is selected according to the logic value assigned to inputs X1 and X2;

an ISO format adaptor (E-Fig.6), containing three or more windows (F-Fig.6) into which the microchips can be inserted (G-Fig.6).

The purpose of this device is to switch rapidly from one telephone line to another without mechanical intervention.

Claims

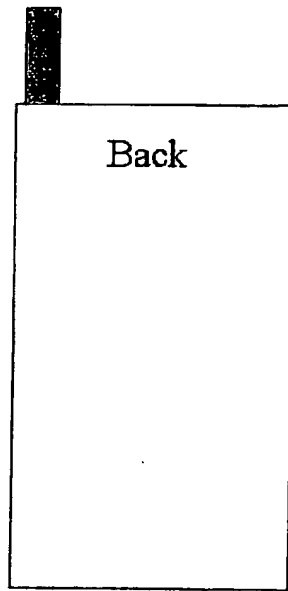
Cellular telephone containing a switching circuit which makes it possible to switch the wires leading from the various microchips for the different telephone lines;

Cellular telephone, as in the previous claim, in which an ISO format adaptor card is inserted, this containing three or more windows into which the microchips for the different telephone lines are inserted;

Cellular telephone, as in Claim 1, which contains several plug-in sockets into which are inserted the microchips for the different telephone lines (Fig.8);

Cellular telephone, as in the preceding claims, whose switching circuit contains a multiplexer (MUX) with four five-line inputs formed in turn by five multiplexers with four one-line inputs connected in parallel and commanded by the two inputs X1 and X2;

Cellular telephone, as in the preceding claims, which makes it possible to switch the various telephone lines by means of the menu key or another special key.



(A)

Fig. 1

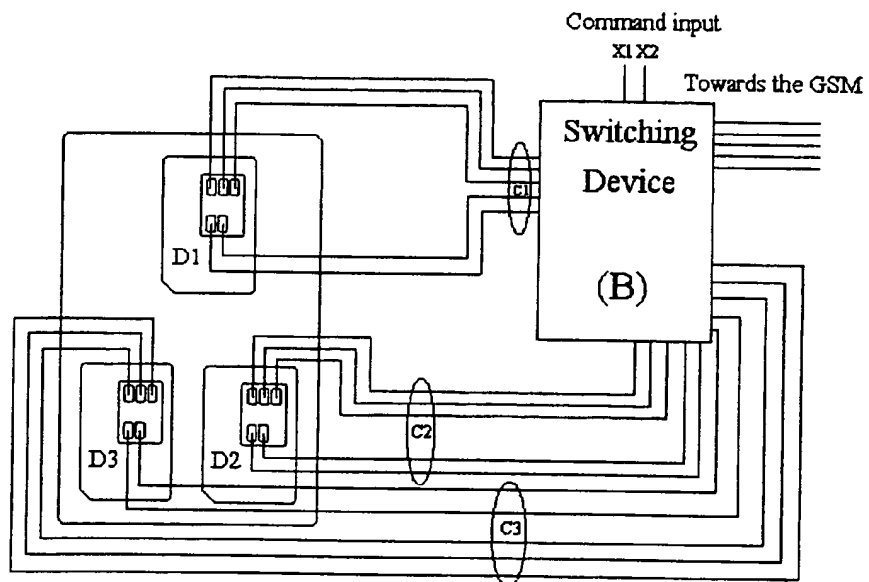


Fig. 2

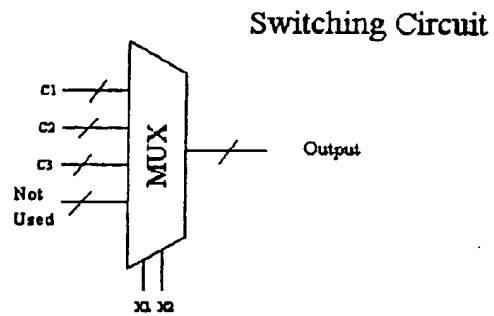


Fig. 3

MUX truth table

X1	X2	OUTPUT
0	0	C1
0	1	C2
1	0	C3
1	1	Unused

Fig.4

Fig. 6

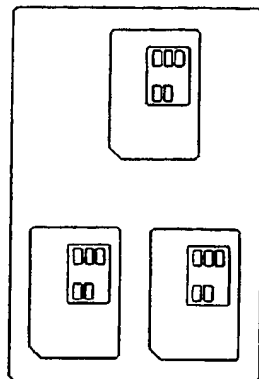
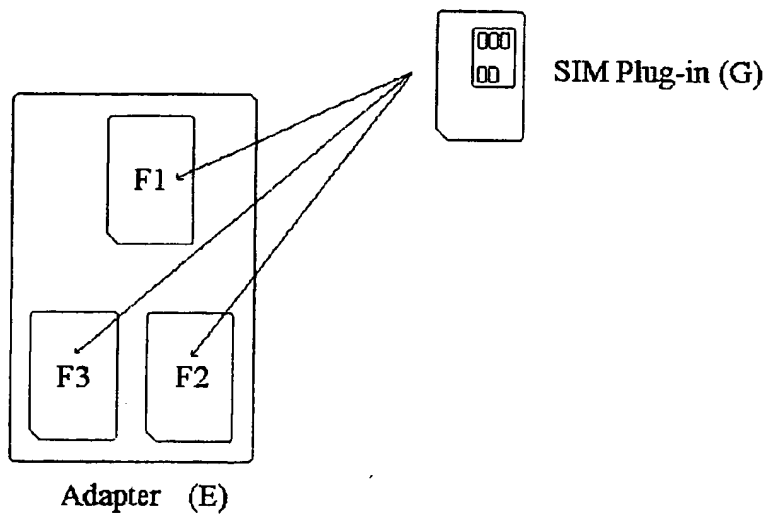


Fig.7

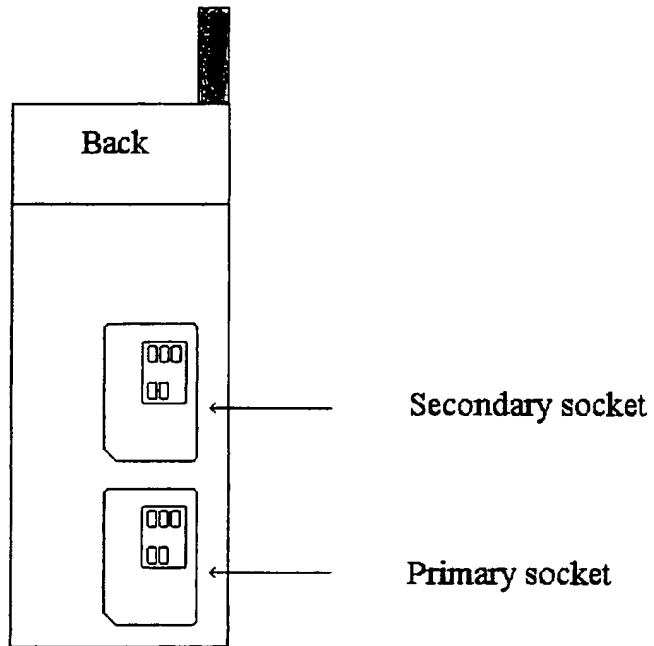


Fig. 8

INTERNATIONAL SEARCH REPORT

International Application No

PCT/IT 98/00308

A. CLASSIFICATION OF SUBJECT MATTER

IPC 6 H04Q7/32

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 H04Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 734 928 A (WEINER SHELDON ET AL) 29 March 1988 see column 3, line 3 - line 64; figure 3 ---	1,3,5
X	EP 0 586 081 A (NOKIA MOBILE PHONES LTD) 9 March 1994 see column 5, line 32 - column 7, line 22 ---	1-3,5
A	MAES P: "SUBSCRIBER IDENTITY MODULE FOR PAN-EUROPEAN MOBILE TELEPHONE NETWORK" SMART CARD TECHNOLOGY, 1990, pages QA, Q01-Q13, XP000199579 see page 2 --- -/--	

☒ Further documents are listed in the continuation of box C.

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Date of the actual completion of the international search

7 May 1999

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>H BSCHER ET AL: "Elektrotechnik Fachbildung Kommunikationselektronik 1" FACHWORTERBUCH ELEKTROTECHNIK ELEKTRONIK, 1989, pages 296-298, XP002094409 BUDIG P - K see page 296, left-hand column, line 1 - page 297, left-hand column, line 7 -----</p>	

INTERNATIONAL SEARCH REPORT

information on patent family members

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